TASK FORCE WEB

Web Enabled Navy

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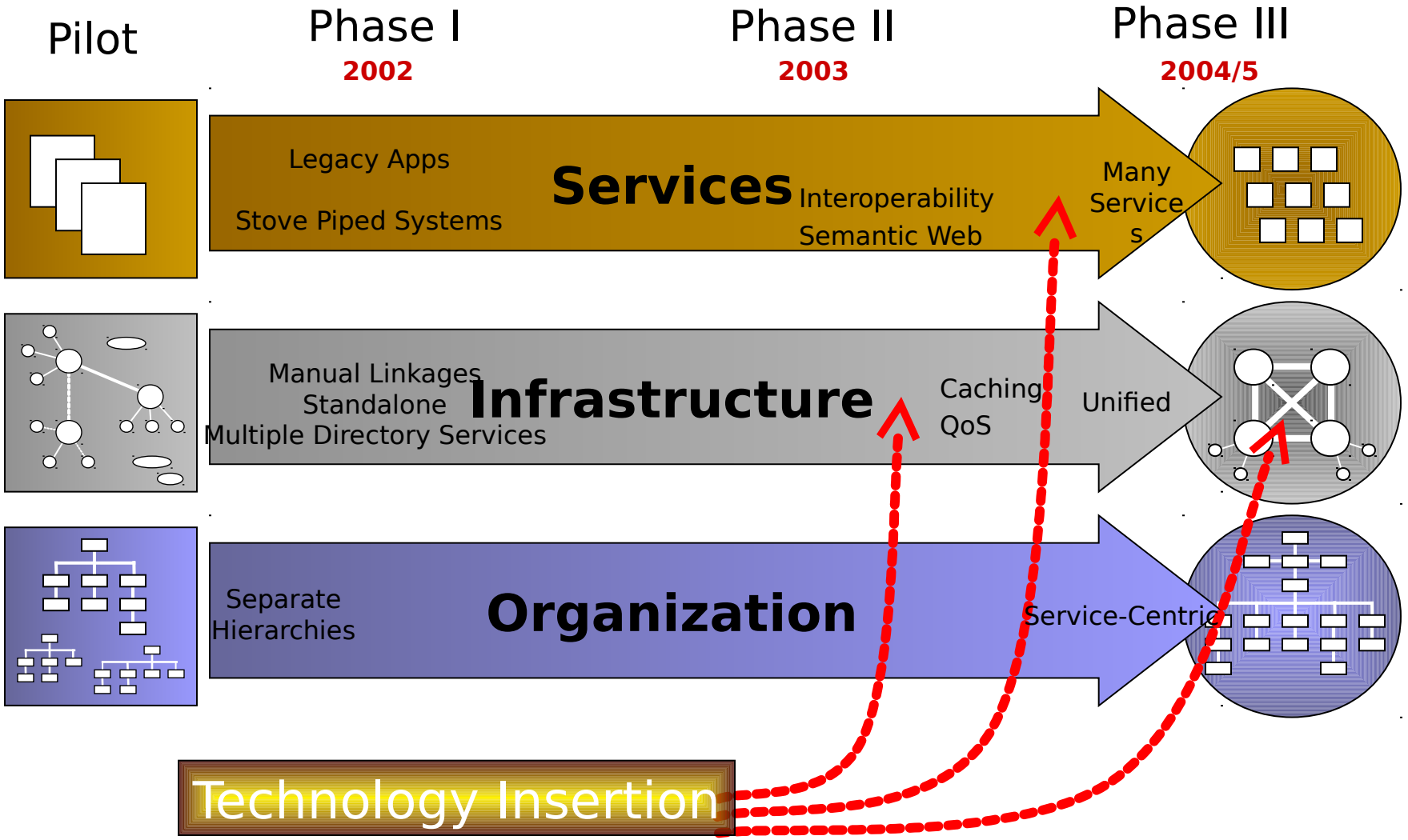
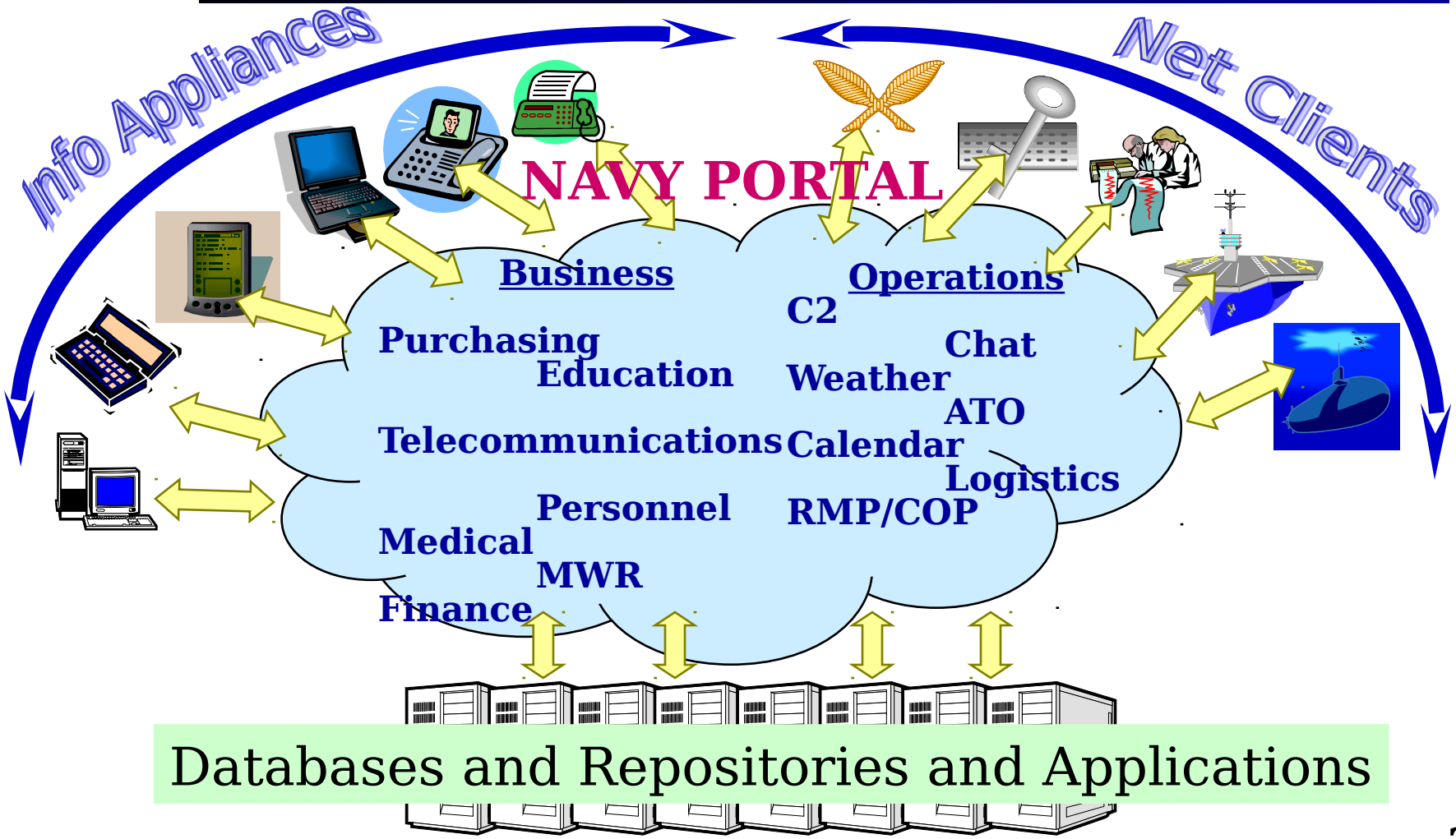
Briefer

Transformation Tracks



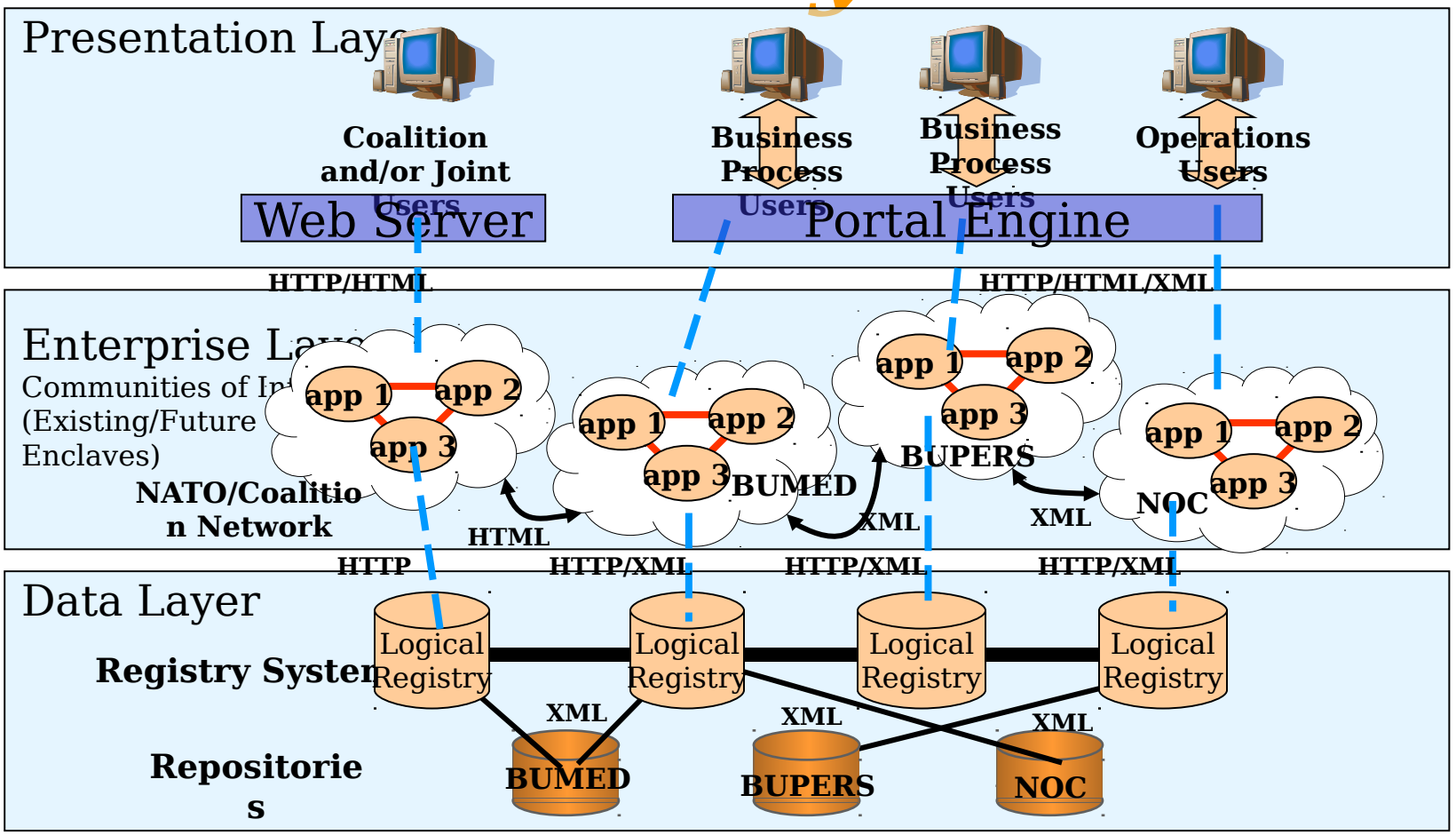
Service-Centric Overlay



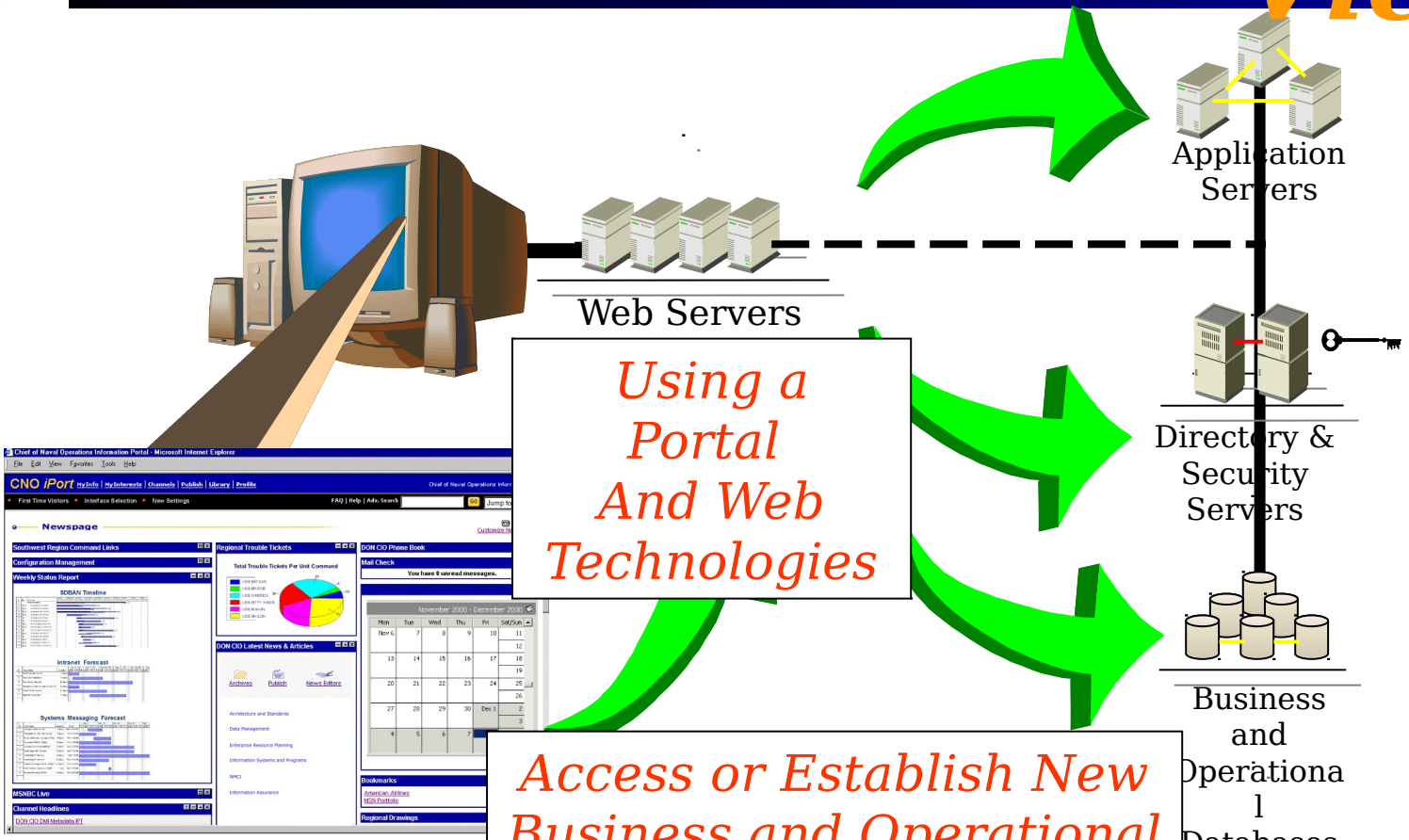
Transforming from Application-Centric to Web Service-Centric

- Evolve the Navy Portal to provide access to web enabled applications that are service centric, tied to authoritative data sources, and fleet requirements
  - Recompose applications to Services
  - Develop a data architecture that supports this new environment

Three Tier Architecture System View

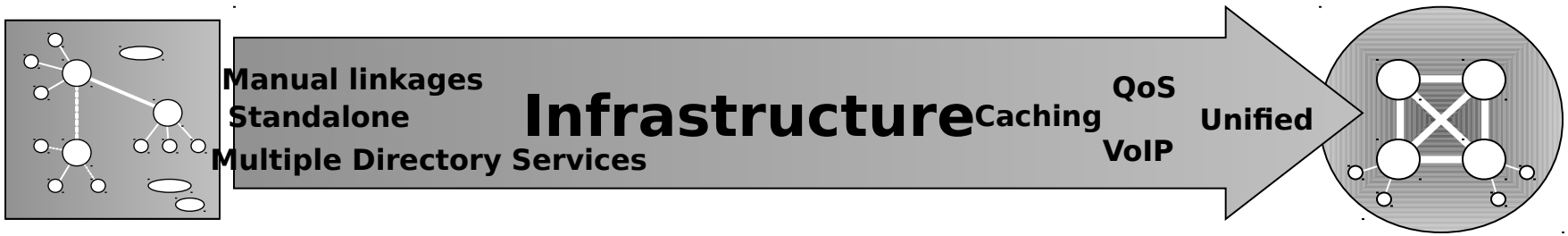


Architecture Operational View


Application Servers
Web Servers
Directory & Security Servers
Business and Operational Databases
Using a Portal And Web Technologies
Access or Establish New Business and Operational Services Anywhere at Anytime

Transforming the Infrastructure

- Transform the Naval Enterprise to support end to end Web enablement
  - Treat afloat and ashore as a single, seamless, global network
  - Provide Enterprise services:
    - IA and directory services architecture
    - Replication & caching architecture



Tying NMCI, BLII, & IT-21 Into an Enterprise Solution

TFW overarches BOTH - provides the Enterprise solution

	Ashore	Afloat
Infrastructure	• Ashore infrastructure and seat services	• Afloat infrastructure and connectivity
Portal	• Basic portal • No application integration • NMCI -- CONUS shore • BLII -- Overseas shore	• No portal • No application integration • Multiple stand alone networks and workstations
User Authentication Services	• Only for NMCI or BLII users	• Only for afloat users

Critical Areas

- Secure messaging
- Knowledge management
- Ontology structure
- Databases/Data Management
- IT Management, Policy and Acquisition
- Firewall Policy
- Mobile Code
- Portals
- eBusiness processes
- Existing infrastructure: NMCI and IT-21
- Legacy applications
- Information Assurance
- Future Warfare Concepts
- Enterprise Resource Planning
- Web Technologies (XML, HTML, etc.)
- Web Architecture
- Emerging Web Technologies
- Bandwidth
- Commercial Standards

Transforming the Organization

- Transform the organization to effectively resource, develop, field, deconflict and manage services
  - Establishment of Functional Area Managers
  - Navywide IT Governance

Impact On Legacy Applications: Reduces complexity and cost

- Less software on the desktop to distribute, maintain, and update
- Portal may be leveraged to provide common functionality such as user authentication
- TFW will simplify configuration management of legacy applications as fewer copies of legacy applications will be required
- Movement from legacy apps to Web Services will support reuse of functionality across the enterprise
- Use of internet standards reduces number of firewall ports and services that must be exposed to potential intruders

Emerging Technologies

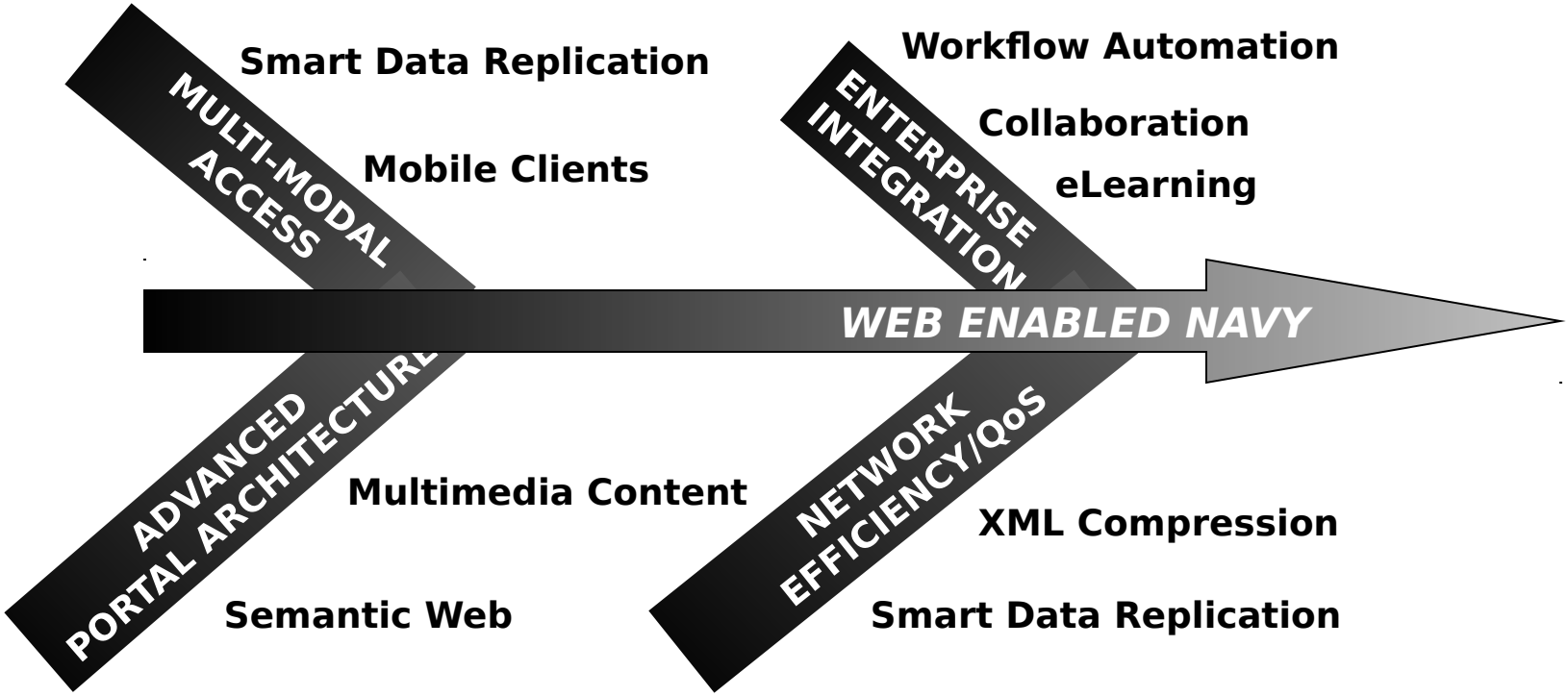
From	To
• Proprietary systems	• Internet standard based systems
• Wired	• Wireless
• HTML	• XML
• Limited browser use	• Universal portal use
• Manual use	• Automation
• Limited specific use	• Service Centric Usage
• Diverse message formats	• Common message format (XML)
• Diverse database exchanges	• XML based database exchanges
• Low bandwidth	• More efficient use of bandwidth
• Desktop	• Network appliance / Handheld
• MHz computers	• GHz computers and PDAs

HTML

XML

Next Gen XML??

Inserting Key Technologies



Web-Enablement Benefits

- Provide for the seamless transformation of information between the afloat, NMCI, and BLII environments
- Centralized application access
- Reduction in applications
- Smart data management
  - Authoritative data sources
  - Consolidation of databases
- Common look and feel
  - Personnel efficiency goes up
  - Single sign-on

Status to Date

- ✓ TFW portal designated as Navy Enterprise portal
- ✓ Pilot system operational on USS George Washington and to limited shore users through Fleet NOC
- ✓ TR Battle Group installation currently underway
- ✓ NMCI portal due to go operational with NMCI 2.0 rollout
- ✓ Beta labs operational; applications/services testing in progress.
- ✓ Strong participation by the Echelon II development community.
- ✓ TFWeb technical team implemented to provide dedicated support

Some Technical Challenges

- Bandwidth allocation
  - Recognition that IP paths are a “necessary step”
    - Potentially highly expensive
- Footprint reduction
  - Alternatives being addressed.
- Replication/Common Directory Structure
  - Impacts user usefulness and architectural validity
    - SSO remains most challenging issue
- Information Assurance

Getting Informed

- Task Force Web Public Site
  - Publicly available documents

http://www.tfw.navy.mil

- Navy Application Developer Open-Source Site
  - Place for info and experiences in application integration to be shared
  - Can create your own user account

https://tfw-opensource.spawar.navy.mil

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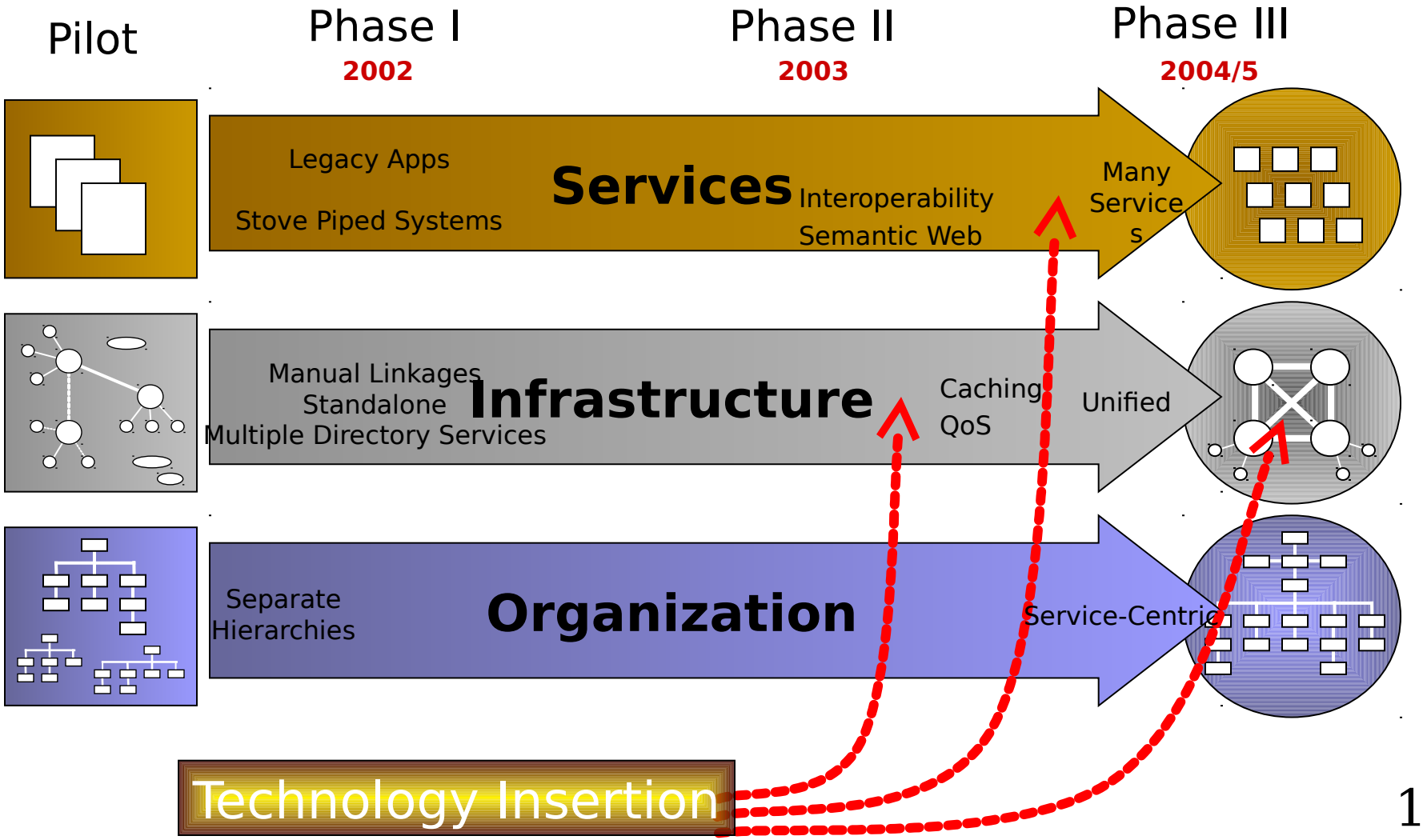

Conclusion

- The Transformation is underway!